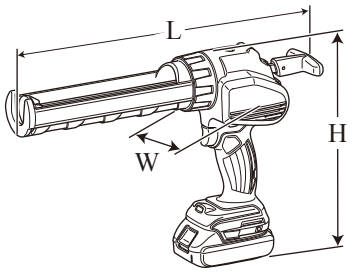
TECHNICAL INFORMATION

Models No. ► BCG140 / BCG180 (LXGC01*1)

Description ► Cordless Caulking Gun

*1 Model number for North and Central American countries



(The image above is BCG180 with 300ml size holder and Battery BL1815.)

Dimensions: mm (")		
Model No.	**BCG140**	**BCG180**
Length (L)	404 (15-7/8)*2, 538 (21-1/4)*3	
Width (W)	108 (4-1/4)	
Height (H)	264 (10-3/8)*4/ 281 (11-1/8)*5	

*2 with 300ml size holder
*3 with 600ml size holder
*4 with 1.3Ah Li-ion battery of BL1415 or BL1815
*5 with 3.0Ah Li-ion battery of BL1430 or BL1830

CONCEPT AND MAIN APPLICATIONS

Model BCG140 and BCG180 are Cordless Caulking Guns powered by 14.4V/18V Li-ion battery.
They are compatible with the following sealants by changing Holder and Piston:

- 300ml/ 600ml cartridge
- Sausage pack
- Bulk sealant

Their other main features are:

- Compact and lightweight design
- High work efficiency
- Variable speed control by dial and trigger switch for constant bead of sealant
- Anti-drip function that stops excess sealant from oozing out just upon release of the switch trigger

► Specification

Specification \ Model		**BCG140**	**BCG180**
Battery	Cell	Li-ion	
	Voltage: V	14.4	18
	Capacity: Ah	1.3/ 3.0	1.3 (1.5*5)/ 3.0
	Energy capacity: Wh	19/ 44	24 (27*5)/ 54
	Charging time: min.	15, 22 with DC18RC	
Max output: W		130	150
Max pushing force: N (lbs)		5,000 (1,100)	
No load speed: mm/sec. (in/min.)		0 - 28 (0 - 66)	
Stroke length: mm (")	300ml holder model	214 (8-3/4)	
	600ml holder model	350 (13-3/4)	
Compatible sealant size	300ml holder model	Cartridge	
	600ml holder model	Cartridge, Sausage pack, Bulk sealant	
Variable speed control	by trigger	Yes	
	by dial	Yes	
Continuous run time (approx.) on a single full battery charge with 300ml cartridge: cartridge quantity		180/ 410	210/ 500
Anti-drip function		Yes	
Overload protection function		Yes	
Rubberized soft grip		Yes	
Trigger lock		Yes	
LED job light		Yes	
Weight according to EPTA-Procedure 01/2003: kg (lbs)		2.1/ 2.2 (4.6/ 4.9)*6, 2.5/ 2.6 (5.4/ 5.8)*7	2.1/ 2.3 (4.7/ 5.1)*6, 2.5/ 2.7 (5.5/ 6.0)*7

*5 for some countries only
*6 with 300ml size holder
*7 with 600ml size holder

► Standard equipment

Holder for 300ml type model
Holder for 600ml type model
Holder joint for 300ml type model
Holder joint for 600ml type model
Piston for cartridge
Piston for sausage pack
Piston for bulk sealant
Rubber ring for sausage pack
Rubber ring for bulk sealant
Nozzle for sausage pack
Nozzle for bulk sealant
Plastic carrying case or Tool bag (for some countries only)

Note: The standard equipment for the tool shown above may vary by country.

► Optional accessories

Li-ion battery BL1415 (for BCG140)
Li-ion battery BL1430 (for BCG140)
Li-ion battery BL1815 (for BCG180)
Li-ion battery BL1830 (for BCG180)
Fast charger DC18RC
Charger DC18SD
Charger DC24SC
Automotive charger DC18SE
Holder sets
Pistons
Rubber rings
Nozzles
Rubber seal

► Repair

CAUTION: Repair the machine in accordance with “Instruction manual” or “Safety instructions”.

[1] NECESSARY REPAIRING TOOLS

Code No.	Description	Use for
1R026	Bearing Setting Pipe 16-8.2	removing Spur gear 10
1R027	Bearing Setting Pipe 18-10.2	holding Carrier A complete when mounting 9 pcs. of Pin 3
1R029	Bearing Setting Pipe 23-15.2	removing Ball bearing 6803LLU
1R031	Bearing Setting Pipe 28-20.2	separating Spur gear 10 from Ball bearing 6806LLU
1R258	V Block	setting Ball bearing 6806LLU when removing Spur gear 10

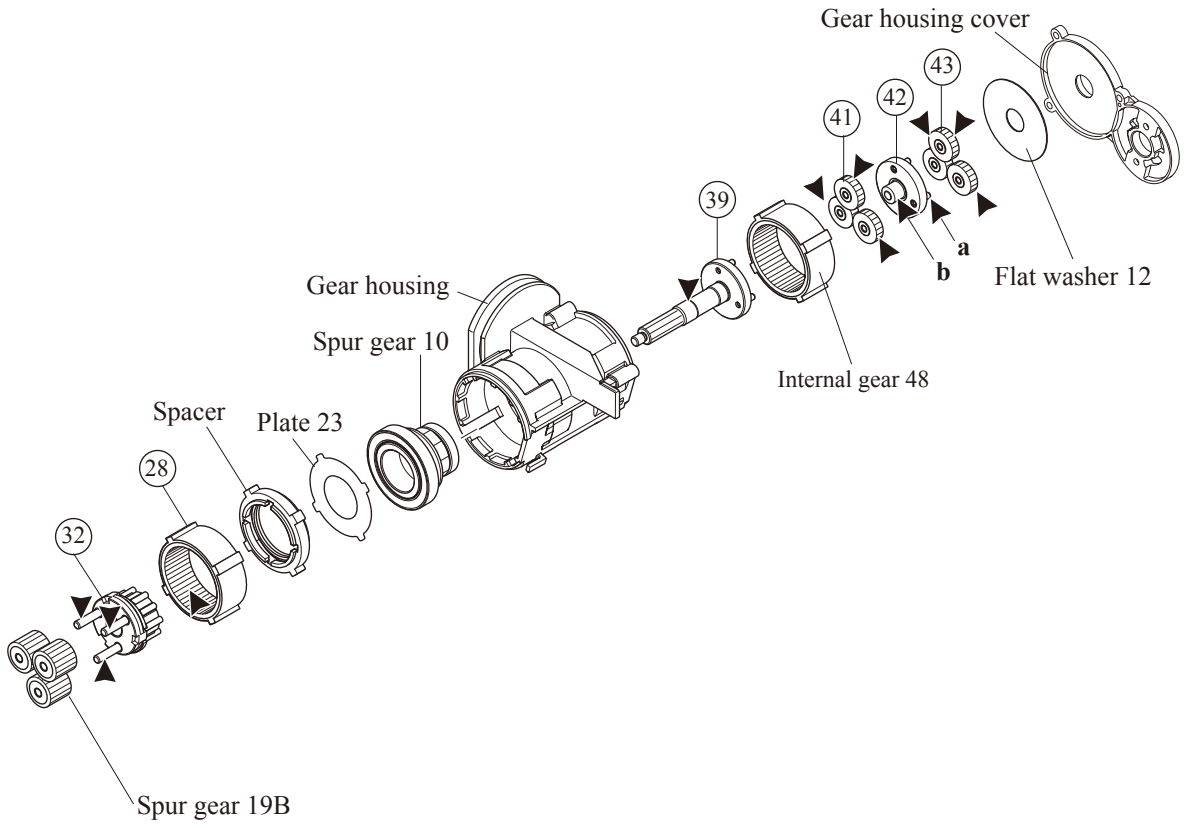
[2] LUBRICATION

Apply **Seal lubricant No.101** to the following portions designated with the black triangle to protect parts and product from unusual abrasion.

Item No.	Description	Portion to lubricate	Amount
(28)	Internal gear 48	Teeth portion	approx. 1.5 g
(32)	Carrier A complete	Pin (shaft) portion for accepting Spur gear 19B	a little
(39)	Spur gear 9C complete	Drum portion where Spur gear 10 contacts	a little
(41)	Spur gear 19A	Teeth portion	a little
(42)	Spur gear 9B complete	**a**: Pin (shaft) portion for accepting Spur gear 19A	approx. 1.0 g
		b: Drum portion	approx. 1.0 g
(43)	Spur gear 19A	Teeth portion	approx. 1.0 g

Fig. 1

Gear Assembly



►Repair

[3] DISASSEMBLY/ASSEMBLY

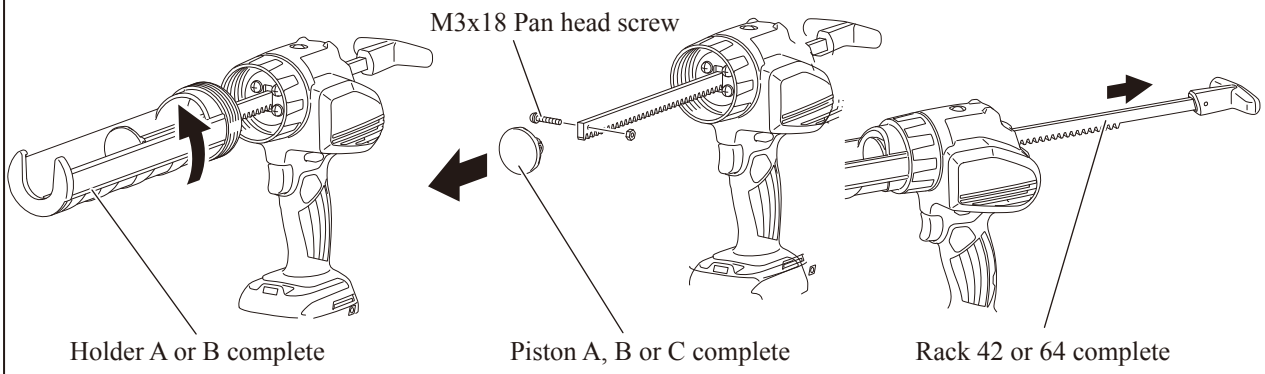
[3] -1. Rack Complete

DISASSEMBLING

Disassemble Rack complete as drawn in **Fig. 2**.

Fig. 2

1. Disassemble Holder complete by turning counterclockwise.
2. Disassemble Piston complete by unscrewing M3x18 Pan head screw.
3. Pull out Rack complete.



ASSEMBLING

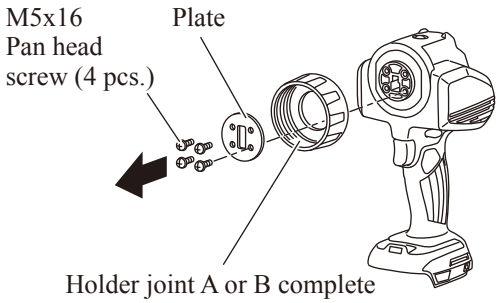
Assemble by reversing the disassembly procedure. (Refer to **Fig. 2**)

[3] -2. Motor Complete, Gear Assembly

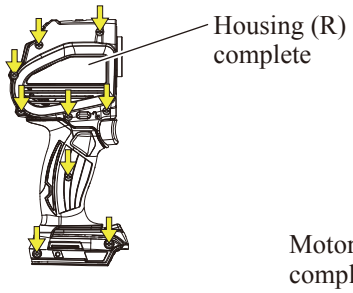
(1) Disassemble the drive section (Gear assembly, Motor complete) as drawn in **Fig. 3**.

Fig. 3

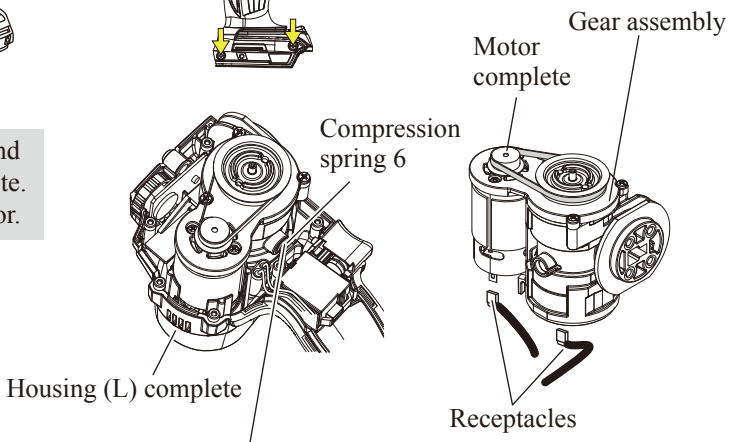
1. Loosen M5x16 Pan head screws, and remove Plate and Holder joint.



2. Loosen 9 pcs. of 3x16 Tapping screw, and remove Housing (R) complete.



6. Separate drive section (Motor complete and Gear assembly) from Housing (L) complete. And disconnect receptacles from DC motor.



Note: Hold Compression spring 6 with your finger, or it will come off.

► Repair

[3] DISASSEMBLY/ASSEMBLY

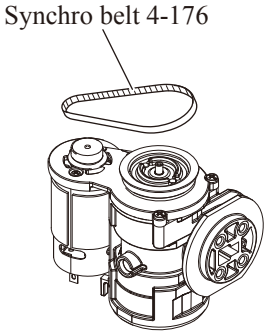
[3] -2. Motor Complete, Gear Assembly (cont.)

DISASSEMBLING

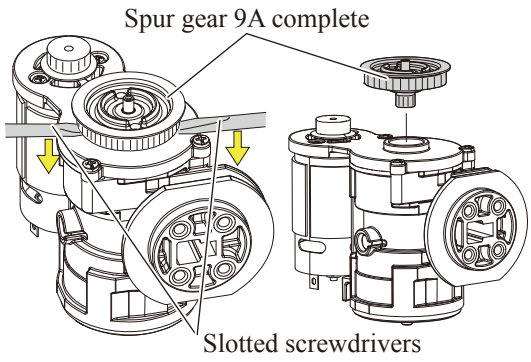
(2) Remove Motor complete from Gear assembly as drawn in **Fig. 4**.

Fig. 4

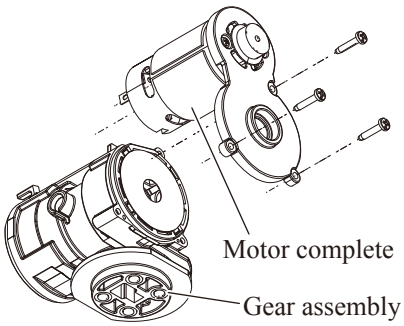
1. Remove Synchro belt 4-176.



2. Remove Spur gear 9A complete from Gear assembly by levering up with Slotted screwdrivers.
Note: Spur gear 9A complete is assembled at the factory, so do not disassemble it.



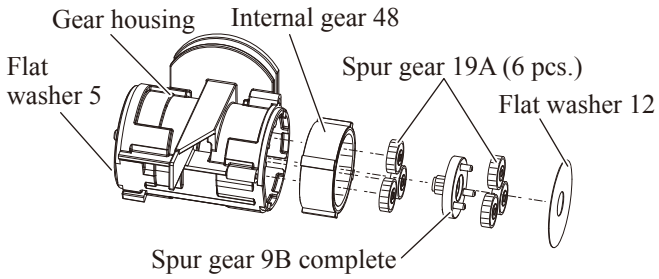
3. Remove Motor complete from Gear assembly by loosening three 3x16 Tapping screws.



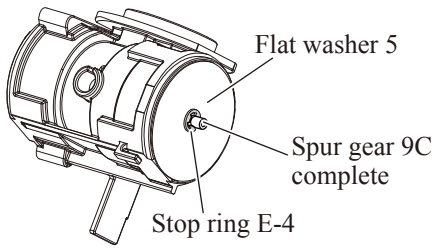
(3) Disassemble component parts of Gear assembly from Gear housing as drawn in **Fig. 5**.

Fig. 5

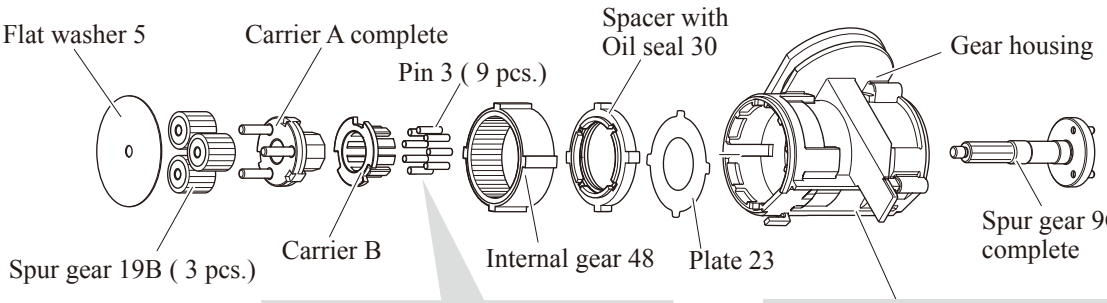
1. Remove Flat washer 12, Spur gear 19A (6 pcs.), Spur gear 9B complete and Internal gear 48 from Gear housing as shown below.



2. Remove Stop ring E-4 from Spur gear 9C complete.



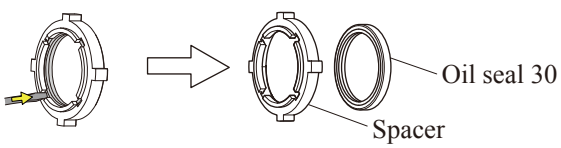
3. Remove the following pars as shown below.



Note: Pin 3 comes off easily, so be careful not to lose them.

Note: Spur gear 10 and Ball bearings still remain in Gear case in this step.

4. Remove Oil seal 30 from the groove on Spacer with a slotted screwdriver.



► Repair

[3] DISASSEMBLY/ASSEMBLY

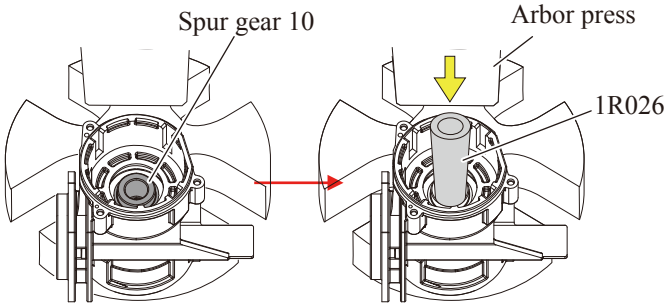
[3] -2. Motor Complete, Gear Assembly (cont.)

DISASSEMBLING

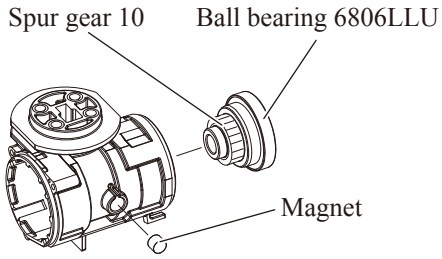
(4) Remove Spur gear 10 and Ball bearings from Gear housing as drawn in **Fig. 6**.

Fig. 6

1. Set 1R026 on Spur gear 10 and press 1R026 with arbor press to remove Spur gear 10.

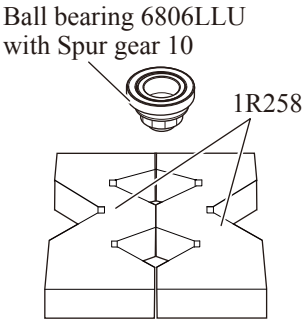


2. Spur gear 10 is removed together with Ball bearing 6806LLU.

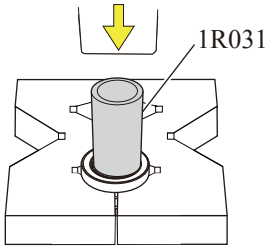


Note: Be sure to prevent foreign materials from sticking to Magnet because it has strong magnetic force.

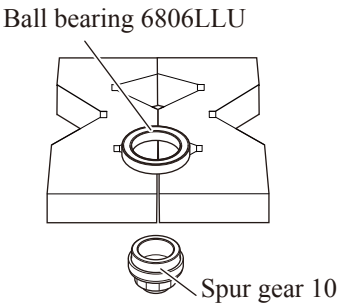
3. Set Ball bearing 6806LLU with Spur gear 10 into 1R258.



4. Set 1R031 onto Spur gear 10 and press the gear with Arbor press.



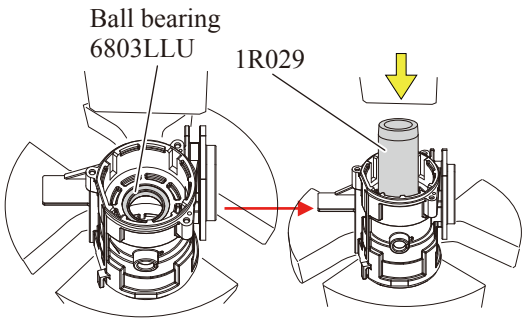
5. Spur gear 10 is removed from Ball bearing 6806LLU.



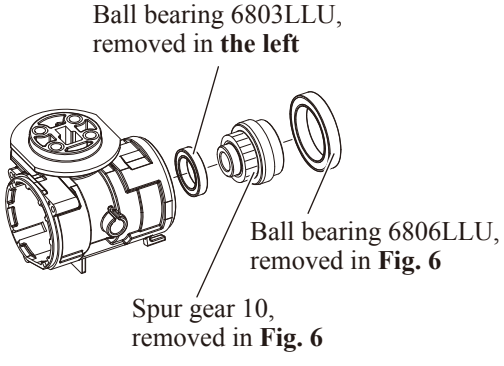
(5) Ball bearing 6803LLU still remains in Gear housing in the step of **Fig. 6**. This ball bearing can be removed as drawn in **Fig. 7**.

Fig. 7

1. Set 1R029 on Ball bearing 6803LLU and press the bearing with Arbor press to remove it.



2. The component parts of Spur gear 10 section are removed as shown below.



► Repair

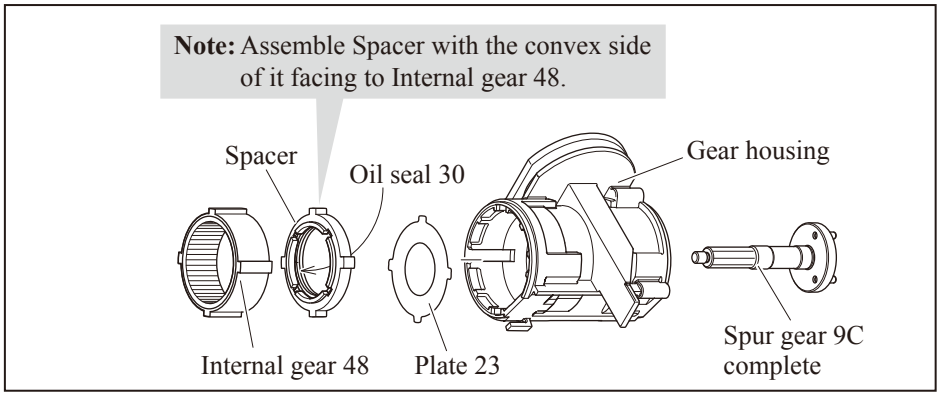
[3] DISASSEMBLY/ASSEMBLY

[3] -2. Motor Complete, Gear Assembly (cont.)

ASSEMBLING

(1) Assemble Ball bearing 6803LLU to Gear housing. Refer to the drawing on the left in **Fig. 7**.
(2) Mount Ball bearing 6806LLU to Spur gear 10. Refer to the drawing on the bottom in **Fig. 6**.
(3) Assemble the Spur gear 10 section to Gear housing. Refer to the drawing on the upper right in **Fig. 6**.
(4) Mount Oil seal 30 to Spacer. Refer to the drawing on the bottom in **Fig. 5**.
(5) Assemble Plate 23, Spacer, Internal gear 48 and Spur gear 9C complete to Gear housing as drawn in **Fig. 8**.

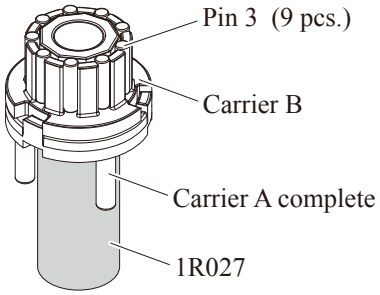
Fig. 8



(6) Assemble the parts on the Flat washer 5 side to Gear housing as drawn in **Fig. 9**.

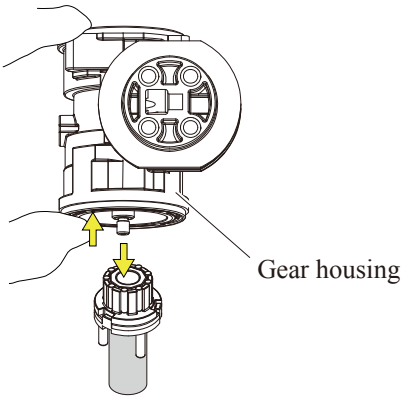
Fig. 9

1. Set Carrier A complete on 1R027, and assemble Carrier B and 9 pcs. of Pin 3.

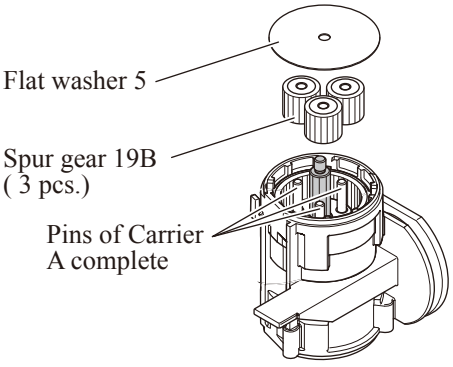


< Note for Assembling of Pin 3 >
Do not lubricate on Pin 3.
And, be careful that Pin 3 easily falls off.

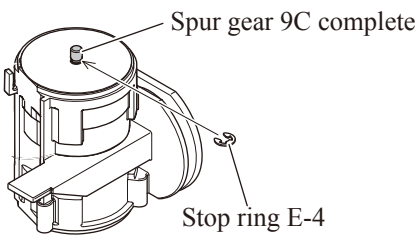
2. While holding Internal gear 48 with your fingers, assemble Gear housing to Carrier A complete section.



3. Assemble Spur gear 19B to the Pins of Carrier A complete. And then, mount Flat washer 5 to Gear housing.



4. Assemble Stop ring E-4 to the shaft on Spur gear 9C complete.



► Repair

[3] DISASSEMBLY/ASSEMBLY

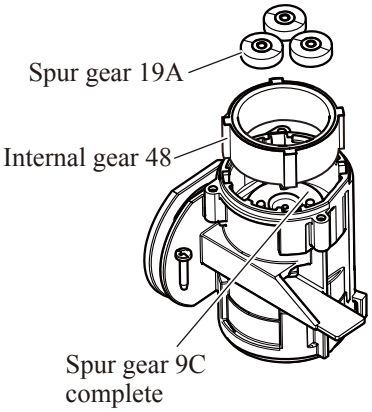
[3] -2. Motor Complete, Gear Assembly (cont.)

ASSEMBLING

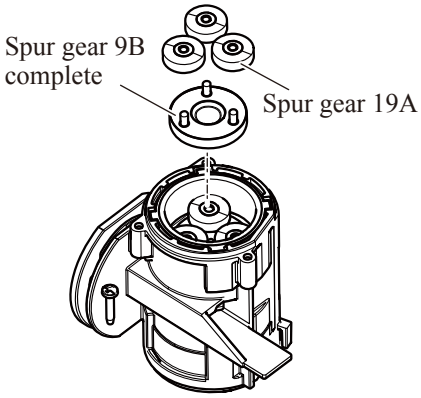
(7) Assemble the parts on the Flat washer 12 side to Gear housing as drawn in **Fig. 10**.

Fig. 10

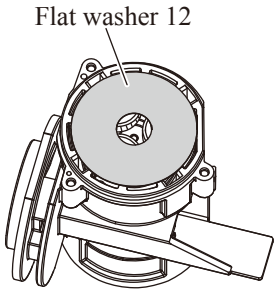
1. Assemble the other Internal gear 48. And then, mount 3 pcs. of Spur gear 19A to the three pins of Spur gear 9C complete.



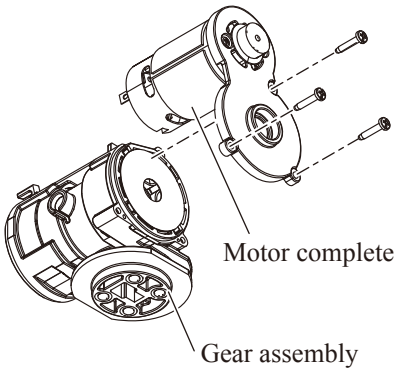
2. Assemble Spur gear 9B complete. And then, mount the other 3 pcs. of Spur gear 19A to the pins of Spur gear 9B complete.



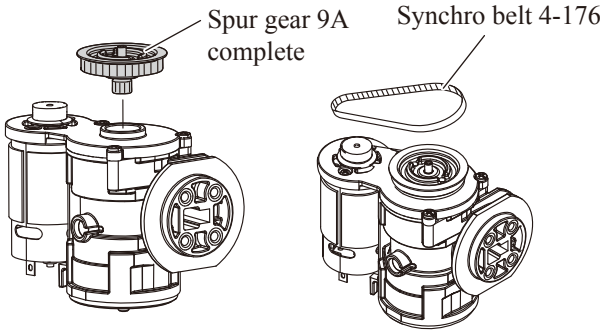
3. Assemble Flat washer 12 to Gear housing. And make sure that it fits to Gear housing.



4. Assemble Motor complete with three 3x16 Tapping screws.



5. Assemble Spur gear 9A complete and Synchro belt 4-176.



► Repair

[3] DISASSEMBLY/ASSEMBLY

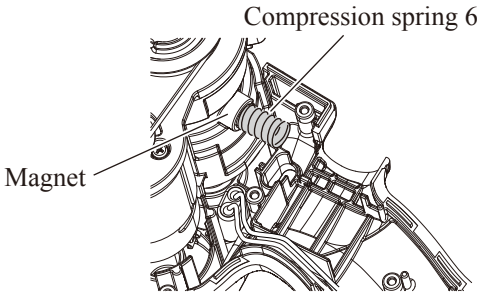
[3] -2. Motor Complete, Gear Assembly (cont.)

ASSEMBLING

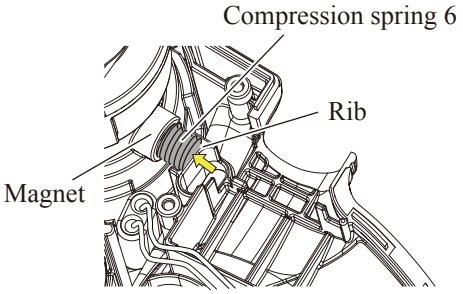
(8) Assemble the driving section (Gear assembly and Motor complete) to Housing (L) complete as drawn in **Fig. 11**.

Fig. 11

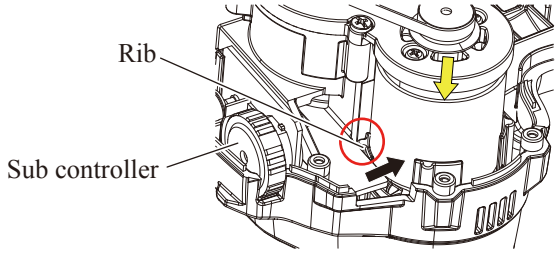
1. Mount Compression spring 6 to Magnet in Gear housing.



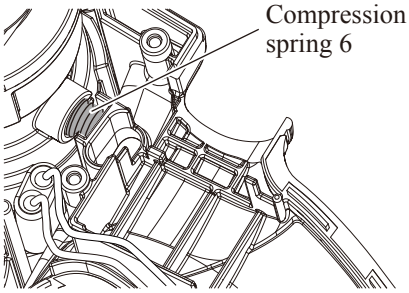
2. Fit Compression spring 6 to the rib on Housing (L) complete with pressing it toward Magnet.



3. Gear assembly is pushed by Compression spring 6 toward Sub controller, and it may not be fitted within the rib on Housing (L) complete at the motor portion. So, push Gear assembly toward the direction of the black arrow shown below to set it within the rib.



4. Make sure that Compression spring 6 fits inside the space.

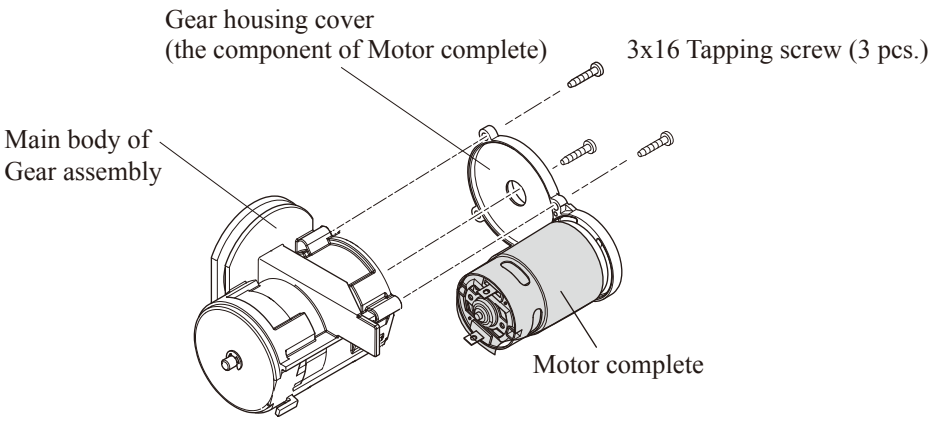


(9) When replacing the whole Gear assembly, use new Gear assembly as drawn in **Fig. 12**.

Fig. 12

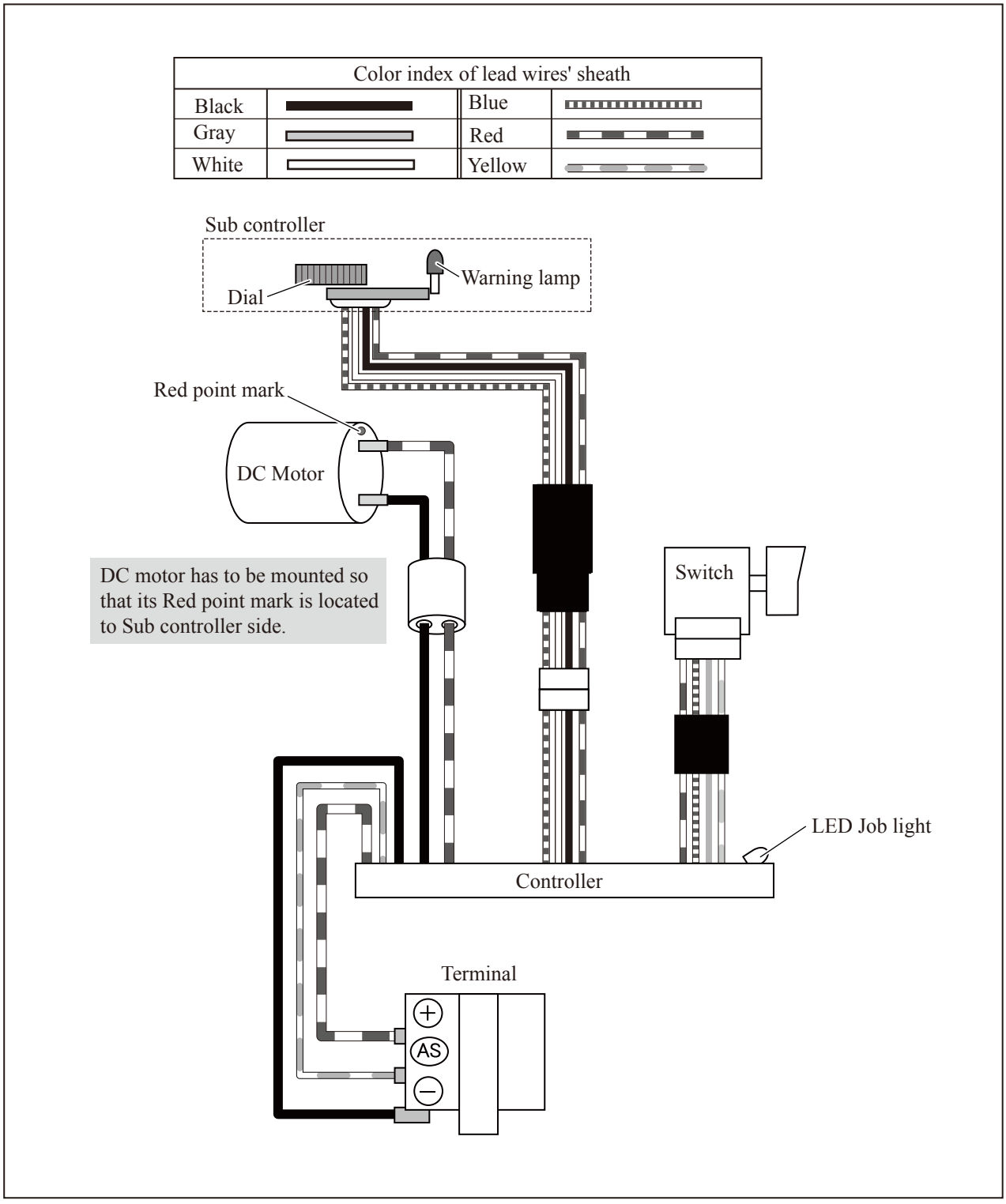
1. Remove three 3x16 Tapping screws and Gear housing cover from Gear assembly.
2. Assemble Motor complete with Gear housing cover to new Gear assembly with three 3x16 Tapping screws.

Note: Scrap Removed Gear housing cover and three 3x16 Tapping screws.



► Circuit diagram

Fig. D-1



► Wiring diagram

Fig. D-2

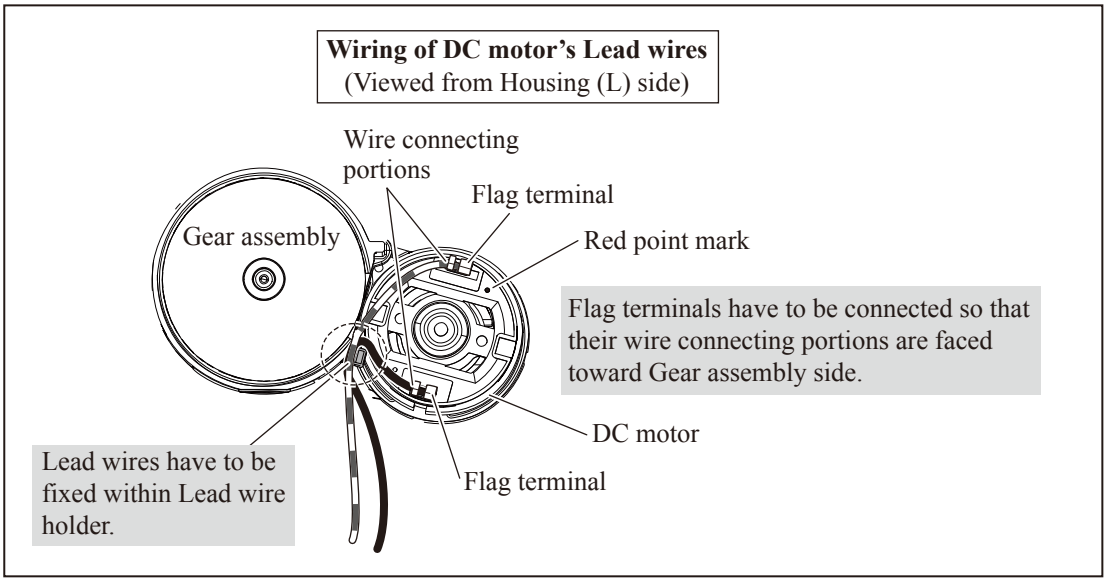
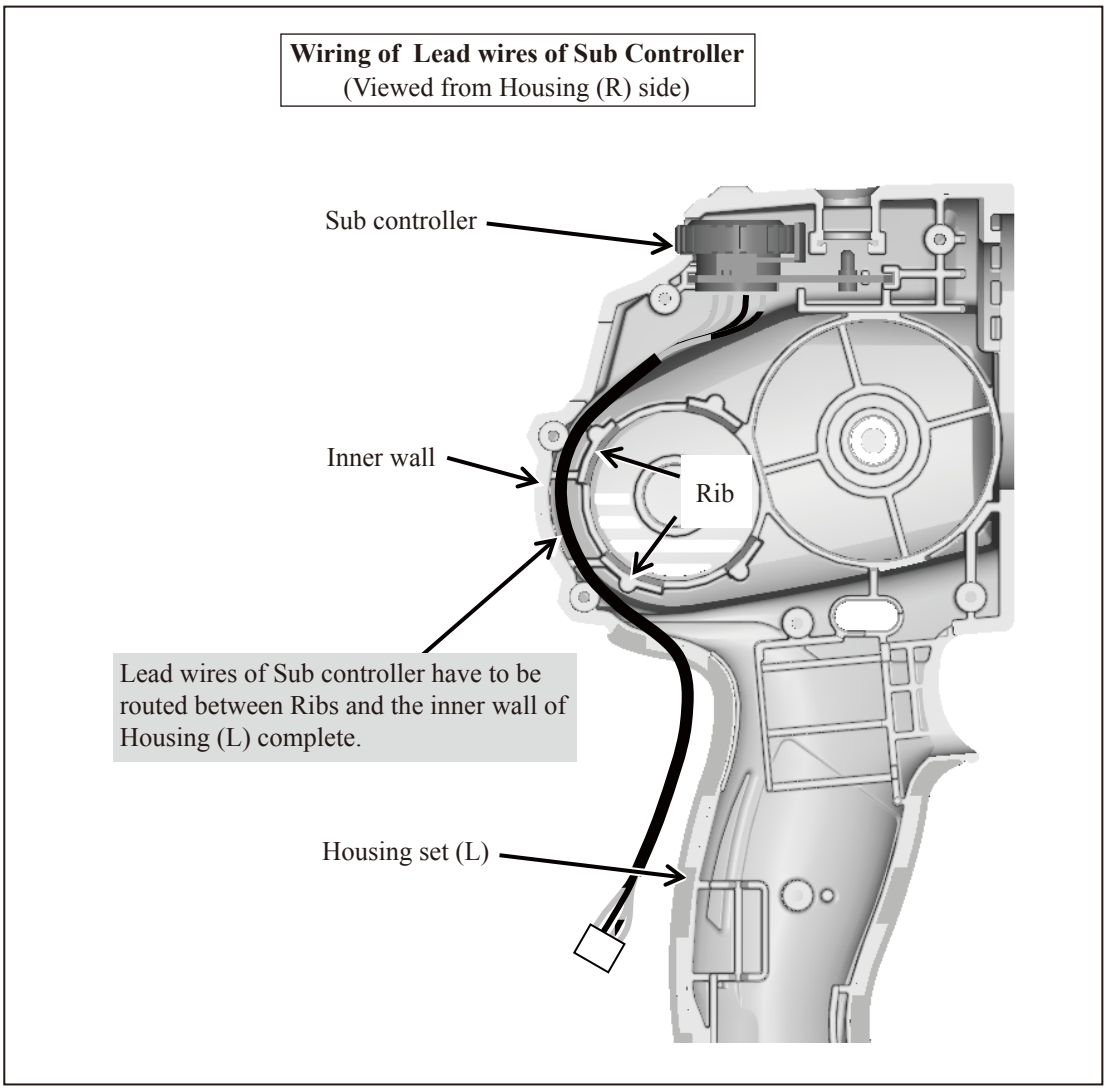


Fig. D-3



► Wiring diagram

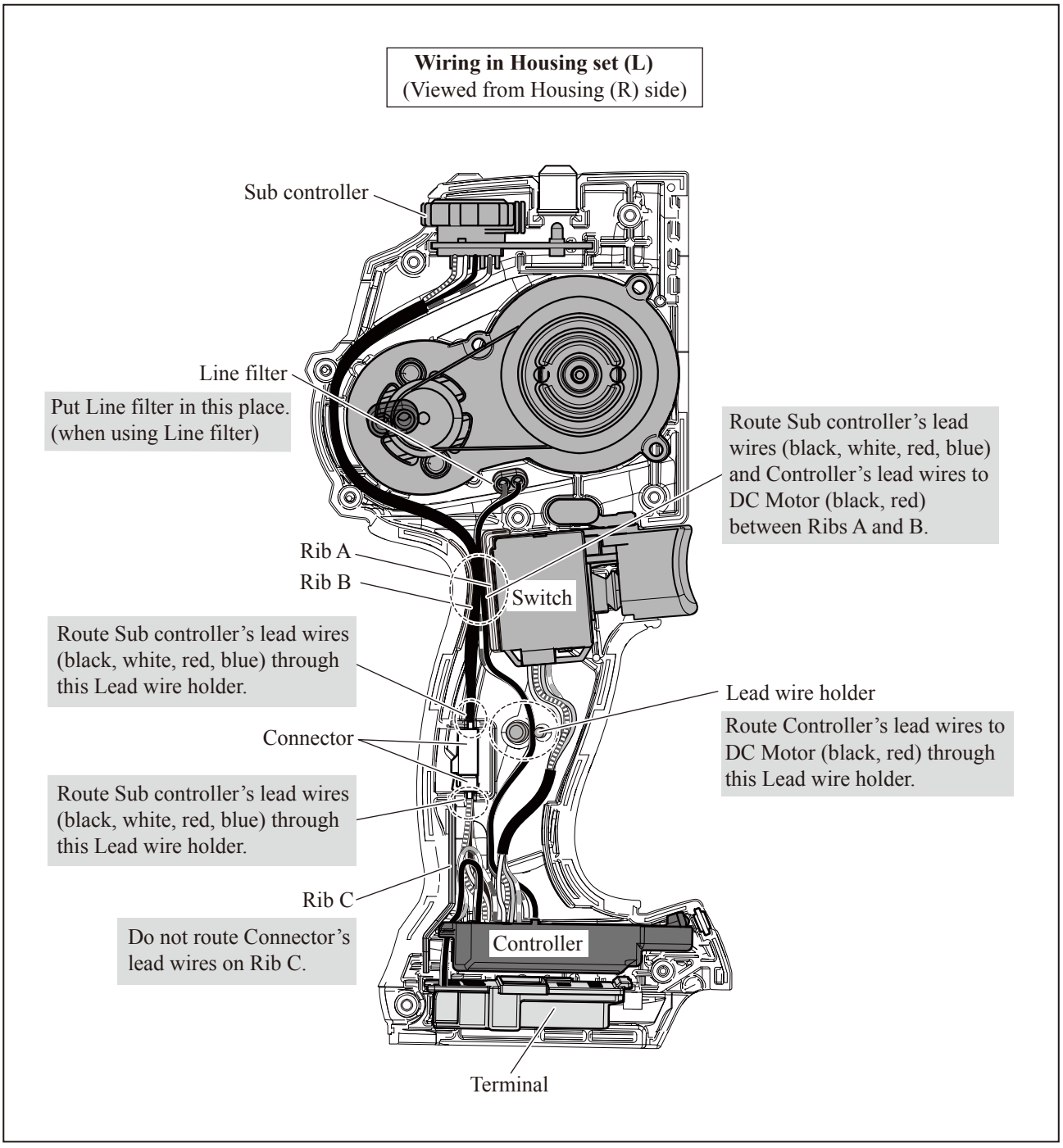



Fig. D-4